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g) positioning the generator to expose the predetermined area of the structure with the radiation; and

h) positioning the sensor unit to receive and sense the generated electromagnetic radiation from the predetermined area of the structure.

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5 23. (Once Amended) A method as claimed in claim 18, wherein the generator includes a quartz halogen lamp.

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31. (Once Amended) A method as claimed in claim 18, wherein the reference wavelength includes at least one wavelength at about 1.06 and 1.66 nanometers, such wavelengths not significantly absorbed by water.

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R E M A R K S

This Preliminary Amendment has been submitted to place the Claims into better condition for examination and to emphasize certain patentable distinctions addressed in detail in the accompanying Response To Requirement for Information mailed June 14, 2002.

15 If the Examiner has any question regarding this Amendment, the Examiner is requested to contact the undersigned at the telephone number indicated below.

MORRIS, MANNING & MARTIN, LLP Respectfully submitted,

1600 Atlanta Financial Center
3343 Peachtree Road, NE
20 Atlanta, GA 30326
(404) 504-7652
(404) 364-4578 - fax
jmj@mmlaw.com

MORRIS, MANNING & MARTIN, LLP



Jon M. Jurgovan
Reg. No. 34,633

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Mark-Up Version of Claims

8. (Once Amended) A method comprising the steps of:

a) exposing with a generator a predetermined area of a structure with first electromagnetic radiation including at least one predetermined wavelength that is significantly absorbed by water;

b) sensing with a sensor unit second electromagnetic radiation from the structure, the second electromagnetic radiation based on the first electromagnetic radiation; and

c) determining whether the water exists in the structure, based on the second radiation sensed in said step (b),

the predetermined area of the structure exposed in said step (a) being at least one square meter.

10. (Once Amended) A method comprising the steps of:

a) exposing with a generator a predetermined area of a structure with [the] first electromagnetic radiation including at least one predetermined wavelength that is significantly absorbed by water;

a) b) sensing with a sensor unit [the] second electromagnetic radiation from the structure, the second electromagnetic radiation based on the first electromagnetic radiation;

20 c) determining whether a water-suspect area exists in the structure, based on the second radiation sensed in said step (b);

d) if said step (c) determines that a water-suspect area exists in the structure, testing the water-suspect area using at least one of a moisture detector, a capacitance meter, an endoscopic probe, and a resistivity meter; and

25 e) determining whether water is present in the structure, based on the testing of said step (d).

12. (Once Amended) A method comprising the steps of:

a) exposing with a generator a predetermined area of a structure to electromagnetic radiation including at least one predetermined exposure wavelength

significantly absorbed by water, and at least one predetermined reference wavelength that is not significantly absorbed by water;

- b) sensing with a sensor unit electromagnetic radiation from the exposed predetermined area of the structure at a predetermined detection wavelength that is
5 sensitive to the exposure wavelength if water is present in the exposed predetermined area of the structure, and that is not sensitive to the exposure wavelength if water is not present in the exposed predetermined area of the structure, and at the reference wavelength;
- c) determining whether the exposed predetermined area of the structure
10 includes a water-suspect area, based on the electromagnetic radiation sensed in said step
(b) at the detection and reference wavelengths;
- d) if said step (c) determines that a water-suspect area exists in the structure, testing the water-suspect area using at least one of a moisture detector, a capacitance meter, an endoscopic probe, and a resistivity meter; and
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- e) determining whether water is present in the structure, based on the testing of said step (d).

18. (Once Amended) A method comprising the steps of:

- a) generating with a generator electromagnetic radiation including at least one predetermined exposure wavelength that is significantly absorbed by water and is not significantly absorbed by material composing the structure, and at least one predetermined reference wavelength that is not significantly absorbed by water and the material composing the structure;
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- b) exposing with the generator the generator a predetermined area of the structure with the generated electromagnetic radiation;
- c) sensing with a sensor unit at least a portion of the generated radiation from the exposed area of the structure to determine a first intensity level of the radiation at the exposure wavelength, and a second intensity level at the reference wavelength;
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- d) comparing the first and second intensity levels;

e) determining that the water-suspect area includes water if the first and second levels differ by at least a predetermined amount; and

f) determining that the water-suspect area includes no water if the first and second levels do not differ by at least the predetermined amount.

5 19. (Once Amended) A method as claimed in claim 18, [wherein said steps (a) and (b) are performed with an electromagnetic radiation generator, and wherein said steps (c) and (d) are performed with a sensor unit,] the method further comprising the steps of:

before the performance of said steps (a) - (f),

10 g) positioning the generator to expose the predetermined area of the structure with the radiation; and

h) positioning the sensor unit to receive and sense the generated electromagnetic radiation from the predetermined area of the structure.

23. (Once Amended) A method as claimed in claim [22] 18, wherein the generator includes a quartz halogen lamp.

15 31 (Once Amended) A method as claimed in claim 18, wherein the reference wavelength includes at least one wavelength at about 1.06 and 1.66 [manometers] nanometers, such wavelengths not significantly absorbed by water.